



# भारत का राजपत्र The Gazette of India

प्राधिकार से प्रकाशित  
PUBLISHED BY AUTHORITY

सं० 51] नई दिल्ली, शनिवार, दिसम्बर 17, 1988 (अग्रहायण 26, 1910)

No. 51] NEW DELHI, SATURDAY, DECEMBER 17, 1988 (AGRAHAYANA 26, 1910)

इस भाग में भिन्न पृष्ठ संख्या दी जाती है जिससे कि यह अलग संकलन के रूप में रखा जा सके ।

[Separate paging is given to this Part in order that it may be filed as a separate compilation]

## भाग III—खण्ड 2

### [PART III--SECTION 2]

पेटेंट कार्यालय द्वारा जारी की गई पेटेंटों और डिजाइनों से सम्बन्धित अधिसूचनाएं और नोटिस

[Notifications and Notices issued by the Patent Office relating to Patents and Designs]

#### THE PATENT OFFICE PATENTS AND DESIGNS

Calcutta, the 17th December 1988

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1—377 GI/88

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## CORRIGENDUM

In the Gazette of India, Part III, Section 2, dated 23rd April, 1988 under the heading "Complete Specification Accepted" on Page 321.

In respect of Patent No. 162284 (717/Mas/84) in the Applicant and Inventor column, delete the name of the inventor and read only the name of Applicant as :

"SENGALIPALAYAM DASA NAIDU RANGASWAMY, No. 24, SENGALIPALAYAM, N. G. G. O. COLONY POST, COIMBATORE 641 022, TAMIL NADU."

and insert the words

"Inventor : Govindaswamy Venkatachalapathy" after the words "Tamil Nadu".

## REGISTRATION OF PATENT AGENTS

The following person has been registered as Patent Agents  
Shri Parag R. Amladi,  
C/o. M/s. Purshottamdas Gukuldas,  
39-D. Onlooker Building,  
Sir P. M. Road, Fort,  
Bombay-400 001.

APPLICATION FOR PATENTS FILED AT THE HEAD OFFICE, 234/4, ACHARYA JAGADISH BOSE ROAD, CALCUTTA-20.

The dates shown in the crescent brackets are the dates claimed under Section 135, of the Patents Act, 1970.

The 10th November 1988

936/Cal/88. Hitachi Ltd. Process monitoring and control system and method of process monitoring and control.

937/Cal/88. E. I. Du Pont De Nemours and Company New polyester fiberfill.

938/Cal/88. Beloit Corporation. Method & apparatus for pretreating & debarking logs.

939/Cal/88. (1) Costas A. Diamantopoulos; (2) Alex P. Alexandrou. Device for biostimulation of tissue and method for treatment of tissue. (Convention dated 14-4-1988) Canada.

940/Cal/88. Danielli & C. Officine Meccaniche SpA and Ceda SpA Costruzioni Elettromeccaniche E Dispositive D'Automazione. Device to intensify the magnetic field in an ingot mould.

The 11th November 1988

941/Cal/88. Bablu Chandra Dey. Scale of irrational numbers and irrational numbers recurring decimal numbers.

942/Cal/88. Diamalt Aktiengesellschaft. Polysaccharides obtained from the endosperm of the seed of the prosopis juliflora method of derivation and use.

943/Cal/88. E. I. Du Pont De Nemours and Company. Improved spinning of spandex filaments.

944/Cal/88. Lummus Crest Inc. Method of recovering and esterifying maleic anhydride.

945/Cal/88. Gustav Memminger. Yarn supply system for textile machines.

The 15th November 1988

946/Cal/88. Mr. Shridhar. Improvement in or relating to Ball Bearing.

947/Cal/88. Dr. Asoka umar Misra. A novel application of ball-mill in solidification of metals non-metals and alloys effecting multi-axial rotation during solidification process.

948/Cal/88. General Electric Company. Hafnium control rod for nuclear reactors.

949/Cal/88. Gea Luftkühlergesellschaft Happel GmbH & Co. Heat Exchange pipe.

950/Cal/88. Eaton Corporation. Overload relay having adaptive differential mechanism.

951/Cal/88. Fried Krupp Gesellschaft Mit Beschränkter Haftung. Crusher unit for use in a mobile crushing system.

952/Cal/88. Fried Krupp Gesellschaft Mit Beschränkter Haftung. Steel manufacturing system, particularly a mini-steel plant.

The 16th November 1988

953/Cal/88. Hoechst Aktiengesellschaft. Water-soluble disazo compounds, processes for their preparation and their use as dyes.

954/Cal/88. Hoechst Aktiengesellschaft. Water-soluble disazo compounds, processes for their preparation and their use as dyes.

955/Cal/88. Hoechst Aktiengesellschaft. Water soluble 2-naphthol axo compounds, preparation and use thereof as dyes.

956/Cal/88. Institut Bioorganicheskoi Khimii Akademii Nauk Uzbekskoi SSR. Process for producing food dyestuff from vegetable raw materials.

## ALTERATION OF DATE

163960.

(435/Cal/87)

Ante dated to 10th September, 1984.

## PATENTS SEALED

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## REGISTRATION OF DESIGNS

The following design have been registered. The are not open to inspection for a period of two years from the date of registration except as provided for in Section 50 of the Designs Act, 1911.

The date shown in the each entry is the date of registration of the design included in the entry.

Class 1. No. 159558. Dirk Wildemeersch, a Belgian citizen, of Vossenhuil, 8B-8300 Knokke-Heist (Belgium). "Device for inserting and fixing to the uterine fundus an intra-uterine contraceptive device". 30th March, 1988

Class 3. No. 159559. Dirk Wildemeersch, a Belgian citizen of Vossenhuil, 8B-8300 Knokke-Heist (Belgium). "Device for inserting and fixing to the uterine fundus an intra-uterine contraceptive device". 30th March, 1988.

Class 3. No. 159860. The Post Office, a British Public authority incorporated by statute, of post Office Headquarters 33, Grosvenor Place, London SW1X 1 PX, United Kingdom. "An Article Chute". Reciprocity date is 23rd December, 1987 (U.K.).

Class 3. No. 160003. Naresh Bharti trading as Jango Sports, 6049/2, Dev Nagar, Karol Bagh, New Delhi-110005, India, an Indian National of the above address. "Skipping Rope". 29th July, 1988.

Class 3. Nos. 160096 & 160097. L. V. Sham Cottage Industries, 2292/2, Inside Gate Hakiman, Amritsar-143 001, Punjab State, India, an Indian Partnership firm. "Torch". 7th September, 1988.

Class 8. Nos. 160128 to 160132. Taj Mahal Arts & Pile, Indian Partnership Firm, Chauri Road, Bhaldhi-221401, Varanasi (UP), India. "Carpet". 19th September, 1988.

Class 12. No. 159999. M/s. Indus Airconditioning Pvt. Ltd., of 371, Cadell Road, Prabhadevi, Bombay-400 028, Maharashtra, India, Indian Company. "Airconditioning". 28th July, 1988.

*Extn. of Copyright for the Second period of five years.*

No. 155602.

Class-3.

*Extn. of Copyright for the Third period of five years.*

Nos. 143831, 143837.

Class-1.

Nos. 143843, 143844.

Class-3.

## NAME INDEXES OF THE COMPLETE SPECIFICATIONS ACCEPTED DURING THE YEAR : 1985

(Nos. from 155101 to 157020 including accepted specifications Nos. 145526, 145534 etc.)

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A. Aulstrom Osakeyhtio.—156640.  
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 Veb Dampfautomat Leipzig.—155690.  
 Veb Kombinat Fortschritt.—156853, 156871.  
 Veb Schwermas-Chinenbau-Kombinat "Ernst Thalman".—  
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 Veb Werkzeugmaschinen-Kombinat.—156514.  
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 Voltas Limited.—155761, 155763, 156173.

## Name &amp; Appln. No.

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Class.40-B

163950

Int. Cl. B01j 11/40.

AN IMPROVED PROCESS FOR THE PREPARATION OF DEHYDRATION CATALYST FOR USE IN THE CONVERSION OF ETHYL ALCOHOL TO ETHYLENE.

Applicant : PROJECTS & DEVELOPMENT INDIA LIMITED OF P.O. SINDRI, PIN 828122, DHANBAD, BIHAR, INDIA.

Inventors : 1. DR. MON MOHAN SINGH CHIHABRA, 2. DR. BANSH LOCHAN SINGH YADAV, 3. DR. DINA NATH, 4. NANT BHUSAN BHATTACHARYYA.

Application No. 263/Cal/85 filed April 6, 1985.

Complete Specification left on 4th March, 1986.

Appropriate office or opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 9 Claims

A process for the preparation of  $\gamma$ -alumina catalyst for the dehydrogenation of ethyl alcohol which comprises treating commercial sodium aluminate with sodium hydroxide to give treated sodium aluminate having  $\text{Na}_2\text{O}/\text{Al}_2\text{O}_3$  ratio of 0.95 to 1.05 followed by subjecting the treated sodium aluminate to neutralisation and precipitation with nitric acid by controlled simultaneous addition of the aluminate and the acid so as not to leave any residual unreacted acid, said neutralization and precipitation being carried out at a pH in the range of 5.5 to 6.0, followed by filtration and washing of the precipitated aluminium hydroxide, thereafter drying the aluminium hydroxide by heating in a closed atmosphere at temperature of  $60^\circ\text{--}120^\circ\text{C}$  followed by grinding the cooled material and converting the ground material into globules using up to 10% by weight of a compatible binder, and thereafter subjecting the said globules to activation by heating at temperatures in the range of  $60$  to  $500^\circ\text{C}$  to obtain  $\gamma$ -alumina.

Compl. Specn. 17 pages. Drg. Nil.

Class. 63-E.

163951.

Int. Cl. H02k 9/00.

COOLING OF ROTOR WINDING FOR AN ELECTRODYNAMIC MACHINE.

Applicant : SIEMENS AKTIENGESELLSCHAFT OF WITTELS-BACHERPLATZ 2, D-8000 MUNCHEN 2, WEST GERMANY.

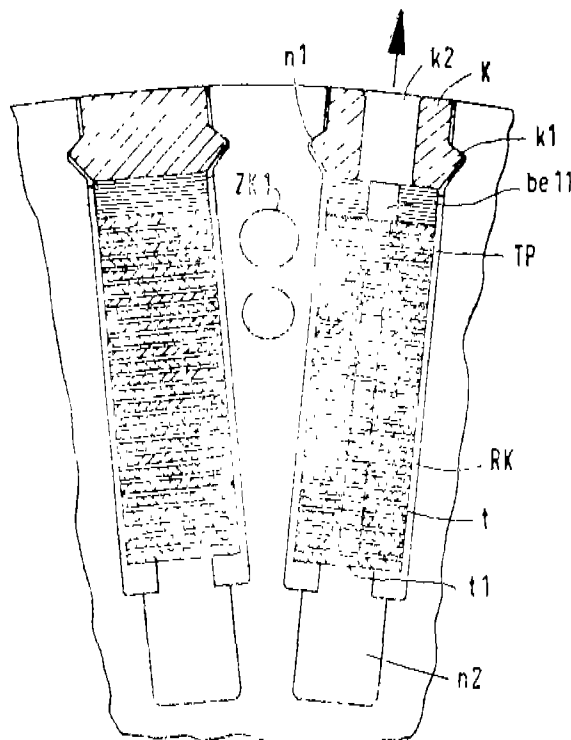
Inventor : 1. EGON PANNEN.

Application No. 349/Cal/85 filed May 6, 1985.

Appropriate office or opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 9 Claims.

A rotor for an electrodynamic machine, comprising a wound rotor body and rotor shafts extending from the ends thereof, the rotor windings having winding heads which extend from the ends of the rotor body to overhang the shafts, each winding head comprising axially extending winding portions, and peripherally extending winding portions which extend along curved paths centered on the rotor axis and which are joined by bend regions to the axially extending winding portions of the winding head, one or each winding head being lined at its radially inner periphery by a cylinder of electrically insulating material defining a cooling gas inlet region between itself and the rotor shaft it overhangs, and the cylinder being provided with openings adjacent said bend region to allow a forced flow of cooling gas to the winding head from said cooling gas inlet region, a set of filling pieces being provided in said winding head between adjacent winding portions to form channels in the axial and peripheral portions for the cooling gas to flow from the said openings, each said filling piece being a recessed piece having recesses provided on both its lateral sides which abut directly against the adjacent longitudinal winding sides portions, the shape and arrangement of which supporting surfaces defines the shapes of the cooling gas channels.



Compl. Specn. 14 pages. Drg. 3 sheets.

Class. 55-F; 128-G.

163952.

Int. Cl. A61b 1/00; A61k 23/00.

A PROCESS FOR MAKING AN IMPROVED DEVICE FOR USE IN A LIGAND-RECEPTOR QUICK ASSAY PROCESS.

Applicant : HYBRITECH INCORPORATED, OF 11085 TORREYANA ROAD, SAN DIEGO, CALIFORNIA 92121, U.S.A.

Inventors : 1. GUNARS EDWIN VALKIRS, 2. NEWTON COLEMAN OWEN, 3. PHILIP ALAN LEVINSOHN.

Application No. 360/Cal/85 filed May 10, 1985.

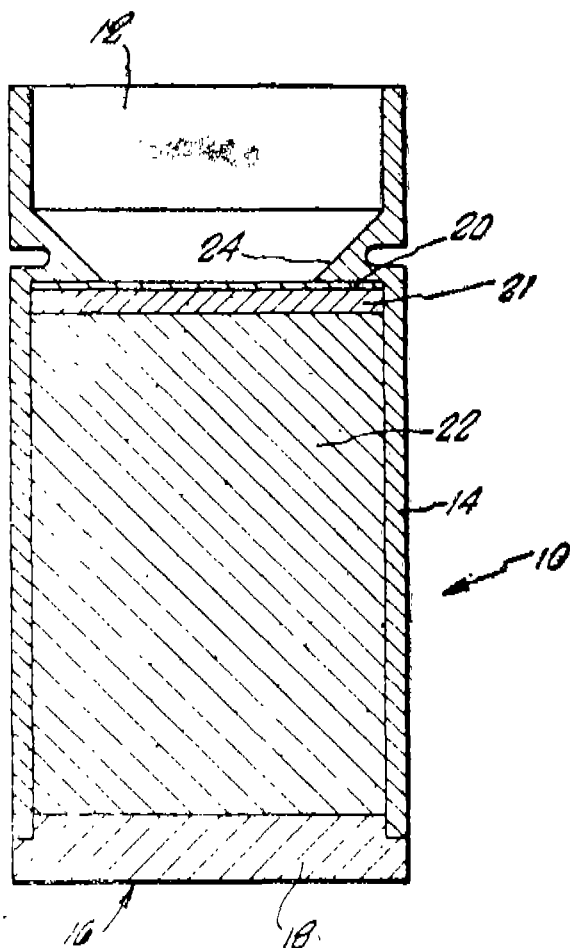
Appropriate office or opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 16 Claims.

A process for making an improved device for use in a ligand-receptor quick assay process for the detection of a target ligand in a fluid sample comprising combining :

(a) a first member which is porous and to which is bound a receptor for the target ligand or which is capable of separating cellular material with which the ligand is associated from the fluid sample, which member has upper and lower surfaces as hereinbefore described, with

(b) a second member which is a body of absorbent material having a surface over which the first member is placed and having capillaries therethrough in a direction generally transverse to the surface over which the first member is placed which capillaries are in communication with the pores on the lower surface of the first member so as to draw fluid added to the upper surface which has permeated the first member into the capillaries of the second member.



Compl. Specn. 17 pages. Drg. 1 sheet.

Int. Cl. D06m 14/00.

163953.

AN IMPROVED METHOD FOR MAKING TEXTILE FINISHING AGENT.

Applicant : AMERICAN CYANAMID COMPANY, AT WAYNE, NEW JERSEY, U.S.A.

Inventor : 2: KENNETH HERALD REMLEY.

Application No. 446/Cal/85 filed June 14, 1985.

Appropriate office or opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## Claim 1.

An improved method for making textile finishing agent comprising the steps of

mixing glyoxal, formaldehyde, urea and a glycol and reacting the said mixture at pH in the range from 6 to 7 for time sufficient to complete the reaction at a temperature of 40° to 80°C and then

changing the pH of the product mixture and further reacting at pH in the range from about 3.5 to about 1.0 for time to complete the reaction at a temperature of from 40° to 80°C and then adjusting the pH of the product mixture to pH in the range from pH 4.5 to 5.5.

Compl. Specn. 8 pages. Drg. Nil.

Class. 108-C.

163954.

Int. Cl. C21c 1/02.

A PROCESS FOR PRODUCING STEEL OF LOW PHOSPHOROUS CONTENT FROM HOT METAL OF USUAL PHOSPHOROUS CONTENT.

Applicant : THYSSEN STAHL AG., OF KAISER-WILHELM-STRASSE 100-D-4100 DUISBURG 11, WEST GERMANY.

Inventors : 1. ERICH HOFFKEN, 2. RUDOLF HAMMER, 3. WOLFRAM FLORIN.

Application No. 655/Cal/85 filed September 16, 1985.

Appropriate office or opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 2 Claims.

Process for producing steel of low phosphorus content from hot metal of usual phosphorus content, in which the hot metal is simultaneously decarburised and dephosphorised in a single process step in a metallurgical vessel in particular in a converter, in which refining gas consisting predominantly or completely of technically pure oxygen is top-blown onto the melt and an inert stirring gas is blown into the melt, particularly from below, characterised in that the vessel is charged with hot metal of a manganese content of less than 0.2% by weight lime is then added and refining is carried out down to a final phosphorus content of 0.005% by weight or less in the steel at the end of blowing, without a change of slag.

Compl. Specn. 10 pages. Drg. Nil.



Class. 129-G.

163955.

Int. Cl. B23b 31/00.

TOOL HOLDER.

Applicant: THE JACOBS MANUFACTURING COMPANY AT 22 EAST DUDLEYTOWN ROAD, GLOOMFIELD, CONNECTICUT 06002, U.S.A.

Inventors: 1. RAYMOND NOEL QUENNEVILLE, 2. HARRY HAMILTON MAYNE, 3. KENNETH HAROLD SICKLER.

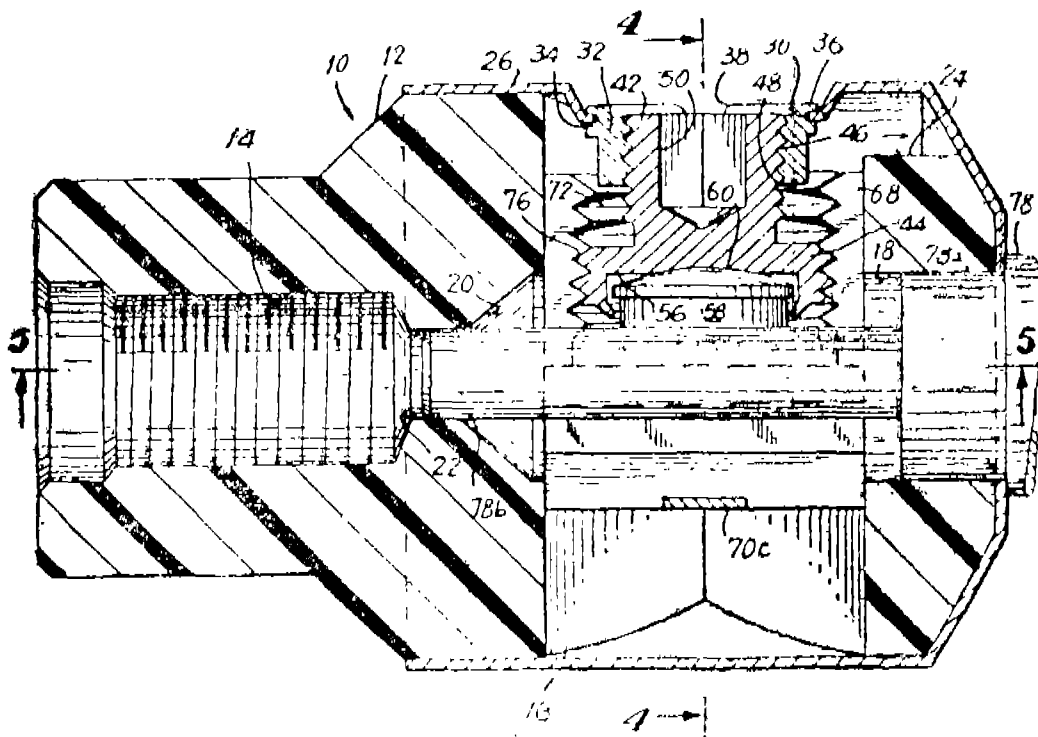
Application No. 50/Cal/86 filed January 23, 1986.

Appropriate office or opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

13 Claims.

A tool holder comprising a substantially cylindrical body having an axial bore formed therethrough and mounting means formed at one end thereof, ways formed through said body in a direction transverse to said axial bore with the axis of said ways intersecting the axis of said body, and a

two jaw chuck utilizing a differential screw mechanism in said ways, characterized in that said differential screw mechanism comprises a pair of separate but mating anvil parts having exterior surfaces slidably engaging internal surfaces of said ways and gripping surfaces disposed at an angle ranging from 15 to 75° said angle being an angle between the gripping surfaces and the plane parallel to the axis of the body and normal to the axis of said ways, said mating anvil parts having internal threads of first pitch, said differential screw mechanism including differential screw having a jaw part at one end formed with external threads of a first pitch and a body part at its opposite end formed with external threads of a second pitch, said external threads of said first pitch engaging said internal threads of said first pitch of said anvil parts, said external threads of said second pitch mating with internal threads of a second pitch of a nut fixed to said body, said anvil parts and said jaw parts of said differential screw mechanism being so related that on rotation of said differential screw relative to said fixed nut a three point gripping contact is made with a tool adapted to be positioned in said axial bore in said cylindrical body, two points of said three point contacts being provided by said gripping surfaces of said anvil parts and the third by a jaw face at said one end of said differential screw.



Compl. Specn. 18 pages. Drg. 6 sheets.

Class. 36-A.

163956.

Int. Cl. F04d 29/00.

A POT-TYPE CENTRIFUGAL PUMP UNIT.

Applicant: KLEIN SCHANZLIN & BECKER AKTIENGESELLSCHAFT, OF POSTFACH 225, JOHANN-KLEINSTRASSE 9, D-6710, FRANKENTHAL (PFALZ), F. R. GERMANY.

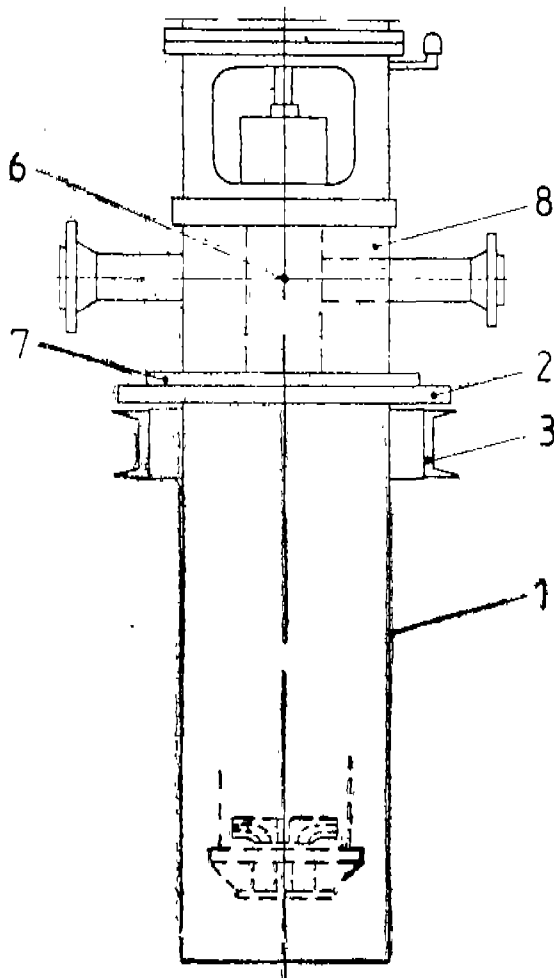
Inventors: 1. JURGEN SCHILL, 2. HANS FRIEDRICH HEENE, 3. RAINER STAHL, 4. FRIEDRICH WEBER.

Application No. 62/Cal/86 filed April 1, 1986.

Appropriate office or opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 4 Claims.

A vertically arranged, pot-type centrifugal pump unit with a support flange provided on the port of the unit characterized in that the flange is in the form of a separate flange independent of the pot and adapted to carry the pot by means of a shoulder molded thereon, there being a non-positive connection between the pot and the rest of the unit by way of fastening elements connected with the separate flange.



Compl. Specn. 5 pages. Drg. 3 sheets.

Class. 29-A

163957

Int. Cl. G06c 11/04.

## PRINT BAND TIMING MARK DETECTOR.

Applicant: CENTRONICS DATTA COMPUTERCORP.  
OF ONE WALL STREET, HUDSON, NEW HAMPSHIRE  
03051, U.S.A.

Inventor: 1. WALTER CLAUDIUS CHAPMAN.

Application No. 307/Cal/86 filed April 18, 1986.

Appropriate office or opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 7 Claims.

A print band timing mark detector for computer printer apparatus comprising:

a sensing circuit including a sensor for providing a source signal, said source signal exhibiting a bipolar pulse responsive to the passing of a print band timing mark;

low pass filter for providing a d.c. reference voltage substantially equal to the nominal d.c. level of said source signal;

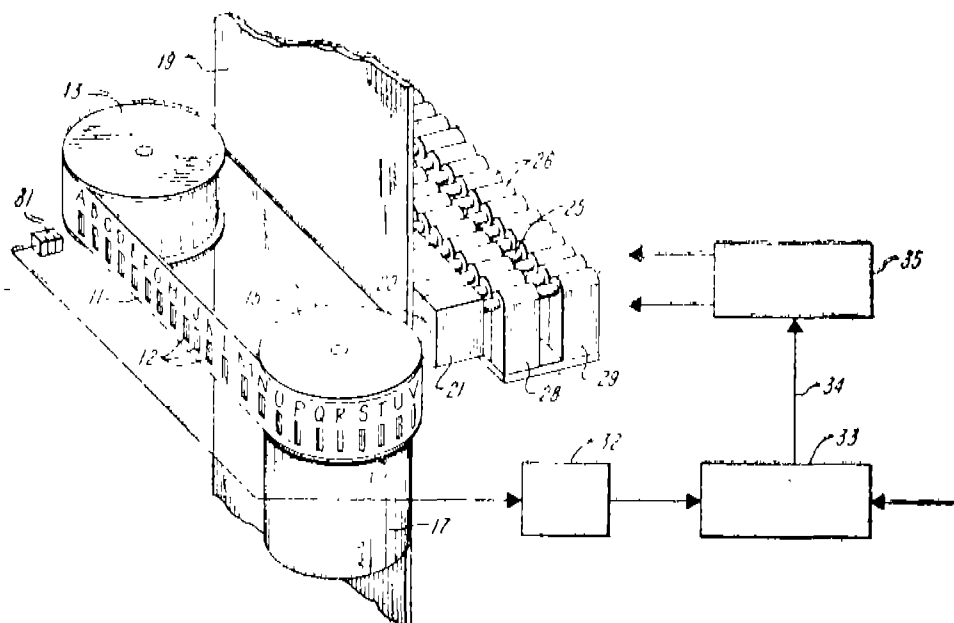
amplifier having inverting and non-inverting inputs and operative to generate an output which is a function of the difference of the inputs;

means for applying said d.c. reference voltage to said inverting input;

means for applying to said non-inverting input a first signal component which is a linear function of said source signal;

means for applying to said non-inverting input a second signal component which is a non-linear function of the amplifier output.

whereby said amplifier responds to the passage of print band timing marks by generating a squarewave signal having one edge which is aligned with the nominal zero crossing of the bipolar pulse.



Compl. Specn. 15 pages. Drg. 2 sheets

Int. Cl. F 04c 2/00.

163958.

## ROTARY MACHINE HAVING SCREW ROTOR ASSEMBLY.

Applicant: HOKUETSU INDUSTRIES CO., LTD. OF 113-1, OAZA OTAKESHINDEN, BUNSUIMACHI, NISHI-KANBARA-GUN, NIIGATA-KEN, JAPAN.

Inventors : 1. MASANORI TANAKA, 2. ATSUSHI MAEHARA, 3. JUNICHI KANAL.

Application No. 474/Cal/86 filed June 25, 1986.

Appropriate office or opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 3 Claims.

A rotary machine having screw rotor assembly comprising a casing (46) having an inner peripheral wall formed by two intersecting cylindrical wall surfaces whose axes are in parallel with each other and two end walls disposed vertically with respect to said axes at each axial end of said inner peripheral wall forming a closed space in said casing (46); a male rotor (1) having helical protrusions in the outer periphery thereof and a female rotor (2) having helical concaves in the outer periphery thereof for receiving said protrusions of said male rotor (1), said male and female rotors (1, 2) being disposed within said closed space formed in said casing to be rotatable and meshed with each other and an inlet and an outlet ports (47, 48) formed in said casing (46) connected with said closed space formed in said casing, respectively, whereby a compressible fluid introduced in an acting space (49) formed by both said rotors (1, 2) and inner peripheral walls of said casing through said inlet port (47) is compressed or expanded during the rotation of said rotors and is discharged from said outlet port (48), a contour line of a tooth profile in a plane perpendicular to a rotating axis of said female rotor (2) being such that a major concave portion except an addendum (Af) formed outside a pitch circle (16) of meshing rotation with the male rotor (1) formed inside said pitch circle (16) and a contour line of a tooth profile in a plane perpendicular to a rotating axis of said male rotor (1) is such that a major portion except a dedendum (Dm) formed inside a pitch circle (15) of meshing rotation with the female rotor (2) is formed outside said pitch circle (15); characterised in that: the tooth profile of the female rotor (2) is formed such that a first portion (G<sub>2</sub>-H<sub>2</sub>) connecting two outermost points (G<sub>2</sub>) and (H<sub>2</sub>) located on the tip of said addendum (Af) is formed by a circular arc having a radius equal to the outer diameter of said female rotor (2) and a centre of the arc being located at a rotating axis of said female rotor (2); a second portion (H<sub>2</sub>-A<sub>2</sub>) connecting said point (H<sub>2</sub>) and a point (A<sub>2</sub>) located on the pitch circle (16) of said female rotor (2) is generated by a point (A<sub>1</sub>) located on the pitch circle (15) of the male rotor tooth profile; a third portion (A<sub>2</sub>-B<sub>2</sub>) connecting said point (A<sub>2</sub>) and a point (B<sub>2</sub>) is formed by a convex circular arc having a radius (R<sub>7</sub>) and a centre (O<sub>7</sub>) of the arc being located on a line (O<sub>7</sub>-A<sub>2</sub>) tangent to the pitch circle (16) of the female rotor (2) at said point (A<sub>2</sub>) and outside the tooth profile of the female rotor (2); a fourth portion (B<sub>2</sub>-C<sub>2</sub>) connecting said point (B<sub>2</sub>) and a point (C<sub>2</sub>) is formed by an envelope developed by a circular arc (B<sub>1</sub>-C<sub>1</sub>) which is a portion of the tooth profile of the male rotor (1); a fifth portion (D<sub>2</sub>-E<sub>2</sub>) connecting points (D<sub>2</sub>) and (E<sub>2</sub>) is formed by a concave circular arc having a radius (R<sub>1</sub>) and centre (O<sub>1</sub>) of the arc being located on a line (3-4) connecting the rotation centres (3) and (4) of the male and female rotors (1, 2) and outside the pitch circle (16) of the female rotor (2); a sixth portion (C<sub>2</sub>-D<sub>2</sub>) connecting said points (C<sub>2</sub>) and (D<sub>2</sub>) is formed by a common tangent or similar concave curve of said fourth portion (B<sub>2</sub>-C<sub>2</sub>) and fifth portion (D<sub>2</sub>-E<sub>2</sub>); a seventh portion (E<sub>2</sub>-F<sub>2</sub>) connecting said point (E<sub>2</sub>) and a point (F<sub>2</sub>) is formed by a convex circular arc having a radius (R<sub>2</sub>) and a centre (O<sub>2</sub>) of the arc being located on an extension of a line (O<sub>1</sub>-E<sub>2</sub>)

intersecting at an angle (Q<sub>1</sub>) with said line (3-4) at a position opposite to the centre (O<sub>1</sub>) of the fifth portion (D<sub>2</sub>-E<sub>2</sub>) with respect to the point (E<sub>2</sub>) and an eighth portion (F<sub>2</sub>-G<sub>2</sub>) which is formed by convex circular arc having a radius (R<sub>8</sub>) and a centre (O<sub>8</sub>) of the arc being located on a line connecting said centre (O<sub>2</sub>) of said seventh portion (E<sub>2</sub>-F<sub>2</sub>) and said point (F<sub>2</sub>) the tooth profile of the male rotor (1) is formed such that a first portion (H<sub>1</sub>-A<sub>1</sub>) connecting a point (H<sub>1</sub>) located on a bottom land (G<sub>1</sub>-H<sub>1</sub>) of the dedendum (Dm) and the point (A<sub>1</sub>) located on the pitch circle (15) of the male rotor (1) is a generated curve of the point (H<sub>2</sub>) located on the female rotor tooth profile a second portion (A<sub>1</sub>-B<sub>1</sub>) connecting said point (A<sub>1</sub>) and a point (B<sub>1</sub>) is formed by an envelope developed by the arc of said third portion (A<sub>2</sub>-B<sub>2</sub>) of the female rotor tooth profile; a third portion (B<sub>1</sub>-C<sub>1</sub>) connecting said point (B<sub>1</sub>) and a point (C<sub>1</sub>) is formed by a convex circular arc having a radius (R<sub>4</sub>) and a centre (O<sub>4</sub>) of the arc being located on a line (3-O<sub>4</sub>) intersecting at an angle (Q<sub>5</sub>) with said line (3-4) connecting the rotating centres (3-4) connecting the rotating centres (3) and (4) of said male and female rotors (1, 2) and at a predetermined distance apart from said line (3-4); a fourth portion (E<sub>1</sub>-E<sub>1</sub>) connecting points (E<sub>1</sub>) and (E<sub>1</sub>) is formed by an envelope developed by said arc of said fifth portion (D<sub>2</sub>-E<sub>2</sub>) of the female rotor tooth profile; a fifth portion (E<sub>1</sub>-F<sub>1</sub>) is formed by an envelope developed by said seventh portion (E<sub>2</sub>-F<sub>2</sub>) of the female rotor tooth profile, a sixth portion (F<sub>1</sub>-G<sub>1</sub>) is formed by an envelope developed by said eighth portion (F<sub>2</sub>-G<sub>2</sub>) of the female rotor tooth profile and a seventh portion (C<sub>1</sub>-E<sub>1</sub>) is formed such that a portion (E<sub>1</sub>-D<sub>3</sub>) connecting said point (E<sub>1</sub>) is formed such that a portion (E<sub>1</sub>-D<sub>3</sub>) connecting said point (E<sub>1</sub>) and a point (D<sub>3</sub>) is formed by a convex circular arc having a radius (R<sub>6</sub>) and a centre (O<sub>6</sub>) of the arc being located on a line (3-O<sub>6</sub>) intersecting at an angle (Q<sub>6</sub>) with said line (3-4) which is tangent to said fourth portion (E<sub>1</sub>-E<sub>1</sub>) at the point (E<sub>1</sub>); a portion (C<sub>1</sub>-WL<sub>1</sub>) connecting said point (C<sub>1</sub>) and a point (WL<sub>1</sub>) located at a predetermined distance apart from said line (3-4) and on the same side with the point (C<sub>1</sub>) with respect to said line (3-4) which is tangent to said third portion (B<sub>1</sub>-C<sub>1</sub>) at the point (C<sub>1</sub>); a portion (D<sub>3</sub>-WL<sub>2</sub>) connecting said point (D<sub>3</sub>) and point (WL<sub>2</sub>) located at a predetermined distance apart from said line (3-4) and on the same side with the point (D<sub>3</sub>) with respect to said line (3-4) which is tangent to said circular arc (E<sub>1</sub>-D<sub>3</sub>) at the point (D<sub>3</sub>); a portion (WD<sub>1</sub>-WD<sub>2</sub>) connecting two points (WD<sub>1</sub>) and (WD<sub>2</sub>) located on a circular arc having similar radius with the outer radius of the male rotor (1) and a centre of the arc being located on the rotating centre (3) of the male rotor (1) and located opposite positions with respect to said line (3-4) is formed by a line increasing said line (3-4) and line (WD<sub>1</sub>-WL<sub>1</sub>) connecting said points (WD<sub>1</sub>) and (WL<sub>1</sub>) and line (WD<sub>2</sub>-WL<sub>2</sub>) connecting said points (WD<sub>2</sub>) and (WL<sub>2</sub>) respectively, are formed by a line whereby a seal lip portion (75) formed by said portion (C<sub>1</sub>-WL<sub>1</sub>), (WD<sub>1</sub>-WL<sub>1</sub>), (WD<sub>1</sub>-WD<sub>2</sub>), (WD<sub>2</sub>-WL<sub>2</sub>) and (D<sub>3</sub>-WL<sub>2</sub>) is provided on the tip of the male rotor tooth profile.

Int. Cl. A 61k 39/00.

163959.

## A PROCESS OF PREPARING A HOMEOPATHIC MEDICINE OF THE NOSODES GROUP "GUMBORONUM"

Applicant & Inventor : NANIGOPAL JANA, VILL-BHATENDA P.O.—RAJARHAT, DIST NORTH 24 PARAGANAS, PIN-743510, INDIA.

Application No. 33/Cal/87 filed January 12, 1987.

Complete Specn. left on 10th June, 1987.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 6 Claims.

A process of preparing a Homoeopathic Medicine, for the treatment of the diseases like Gumboro or Infectious Bursal Disease etc; comprising collecting body parts such as spleen, bursa and liver of the suffering of freshly dead farming fowls attacked with Gumboro or Infectious Bursal Disease, drying, mixing & rubbing the same substance with pure sugar of milk of predetermined quantity and obtaining the medicine in different dilutions or potencies in a conventional manner.

Compl. Specn. 6 pages. Drg. Nil.

Class. 94-H & I.

163960.

Int. Cl. A 23n 1/00; B 02c 4/00; C 13d 1/00.

## A LIQUID EXTRACTION SYSTEM.

Applicant & Inventor : JEAN BOUVET, OF 1319 BUTTERFIELD ROAD, SAN ANSEIMO, MARIA COUNTY, CALIFORNIA, 94960, U.S.A.

Application No. 435/Cal/87 filed June 6, 1987.

Division of Application No. 624/Cal/84 dated 10th Sept., 1984.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 5 Claims.

A liquid extracting system comprising :

a generally cylindrical top roll;

at least one generally cylindrical bottom roll cooperatively associated with top roll so that pulp is milled between said rolls;

a plurality of juice flow channels within and around one of said rolls below the surface thereof and opening from one end thereof; and restraining means at the end/s of any one of said rolls adjacent to said one end of another roll where it most closely approaches the other roll to prevent lateral extrusion of pulp;

said channels being disposed spirally so that juice squeezed from pulp between said rolls flows from channels displaced from said restraining means.

Compl. Specn. 10 pages. Drg. 2 sheets.

Class. 144-E<sub>a</sub>.

163961.

Int. Cl. C 09c 1/48; C 09d 1/02.

## A PROCESS FOR THE PREPARATION OF BLACK PAINT.

Applicant : INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR-721302, DIST. MIDNAPORE, WEST BENGAL, INDIA.

Inventor : I. HAR NARAYAN ACHARYA.

Application No. 262/Cal/85 filed April 6, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 3 Claims

A process for the preparation of black paint which comprises subjecting rice husk to the step of carbonization at a temperature of 300°C to 400°C, grinding the carbonized husk so as to remove coarse particles and then adding a solvent consisting of alkali such as sodium hydroxide thereto to produce a black solution having pH & 8 to 9 comprising essentially of sodium silicate, carbon and free silica and finally subjecting the obtained black solution, to filtration by known methods.

Compl. Specn. 6 pages. Drg. Nil.

Class. 206-F.

163962.

Int. Cl. H 04b 7/08.

## RECEIVING ARRANGMENT FOR HF SIGNALS.

Applicant : N. V. PHILIPS GEOEILAMPENFABRIEKEN, AT GROENEWOUDSEWEG 1, EINDHOVEN, THE NETHERLANDS.

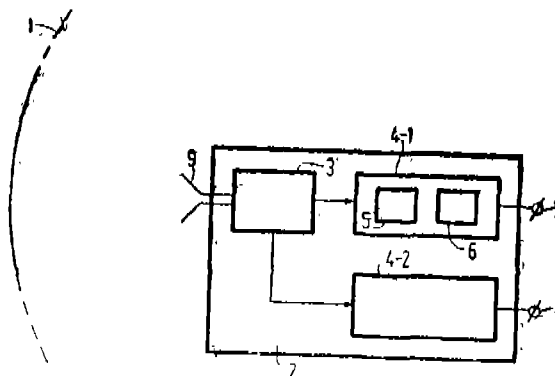
Inventor : L. ROELOF PIETER DE JONG.

Application No. 265/Cal/85 filed April 9, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 6 Claims.

A receiving arrangement for high-frequency signals, comprising a rectangular waveguide filter formed from resonators arranged in cascade and a SHF-signal arrangement which comprises a microstrip circuit and a micro-strip to waveguide transition constituted by a conductor pattern provided on a substrate and connected to the microstrip circuit, characterized in that the microstrip to waveguide transition of the SHF-signal arrangement is in the form of a microstrip to waveguide filter transition fully arranged within an end resonator of the waveguide filter and connected via an aperture in the waveguide filter end face bounding said end resonator to a portion of the SHF-signal arrangement comprising said microstrip circuit located externally of the waveguide filter, and in that the microstrip to waveguide transition and the relevant end resonator are matched by dimensioning at least one of these two components.



Compl. Specn. 15 pages. Drg. 1 sheet.

Class. 195-E.

163963.

Int. Cl. G 05d 1/00, 7/00, 9/00.

## A DEVICE FOR DELIVERING WATER FROM A HIGHER LEVEL TO A LOWER LEVEL.

Applicant & Inventor : SURESH CHANDER SURI, OF 24, NANDEVILLE GARDENS, FLAT NO. B/2/7, CALCUTTA-700019, WEST BENGAL, INDIA.

Application No. 283/Cal/85 filed April, 12, 1985.

Complete Specn. left on 14th April, 1986.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 15 Claims.

A device for delivering water from a higher level to a lower level comprising a box like structure having a base; a back wall and two side walls, the rear of the said device being of a height greater than the front of the device for delivering water from a higher level to a lower level and wherein the top edge of the said side walls are tapered downwardly from the rear to the front, the said side walls being provided with flanges for securing the back wall, the said back wall having a height shorter than the height of the rear of the side walls to form an opening for the entry of water, characterised in that a pair of outwardly curved wings are fitted on the back of the side device near the said opening, the said front of the device or the rear of the device being provided with outwardly extending walls, the said outwardly extending walls being fitted at the sides of the side walls so as to prevent any back flow of water including the prevention of the erosion of the soil and have means for increasing the height of the fall of the water through the device constituting fixing additional side walls and rear walls below the said existing side walls and the back walls with the help of fastening devices such as bolts for which there are provided suitable apertures.

Provisional Specn. 4 pages. Drg. Nil.

Compl. Specn. 16 sheets. Drg. 3 sheets.

Class. 194.11.

163964.

Int Cl. H 01 7/36.

## GLOW-DISCHARGE DECOMPOSITION APPARATUS.

Applicants: KANEGAFUCHI KAGAKU KOGYO KABUSHIKI KAISHA OF 2-4, NAKANOSHIMA 3-CHOME, KITA-KU, OSAKA-SHI, JAPAN; SHIMADZU CORPORATION OF 378, KAWARAMACHIDORI-NIJO-SAGARU-ICHINOFUNARI-CHO, NAKAGYO-KU, KYOTO-SHI, KYOTO-FU, JAPAN.

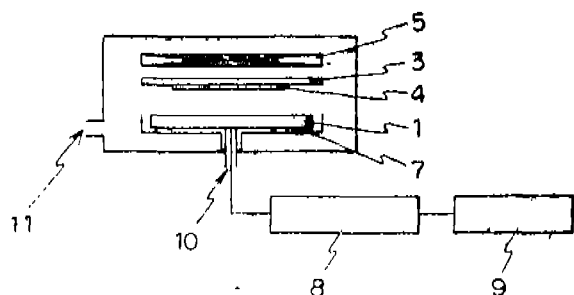
Inventors: 1. YOSHIHISA TAWADA, 2. TAKEHISA MAKAYAMA, 3. MASAHIKO TAI, 4. NOZOMU IKUCHI.

Application No. 456/Cal/85 filed June 21, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 14 Claims.

Glow discharge decomposition apparatus for depositing a film on a substrate by glow-discharge decomposition, comprising ground electrodes, substrates, RF-electrodes, a RF-power supply, a matching circuit and a controlling circuit having at least one electric element; the arrangement being such that each of said substrates is provided on each said ground electrode, placed over each of the RF-electrodes in parallel to each other, said RF-electrodes standing in parallel and being electrically insulated to each other, and the said matching circuit is adapted to accept a RF-power from the RF-power supply which is capable of being controlled by the said electric element of the controlling circuit, whereby same or different rate of RF-power is capable of being supplied on each substrate.



Compl. Specn. 15 pages.

1

Drgs. 6 sheets.

Class. 195-D.

163965

Int. Cl. F 16k 31/00.

## A SERVO-ACTUATED VALVE FITTING.

Applicant: KLEIN, SCHANZLIN & BECKER AKTIEN-GESELLSCHAFT, OF POSTFACH 225, JOMANN-KLEIN-STRASSE 9, D-6710 FRANKENTHAL (PFALZ), F. R. GERMANY.

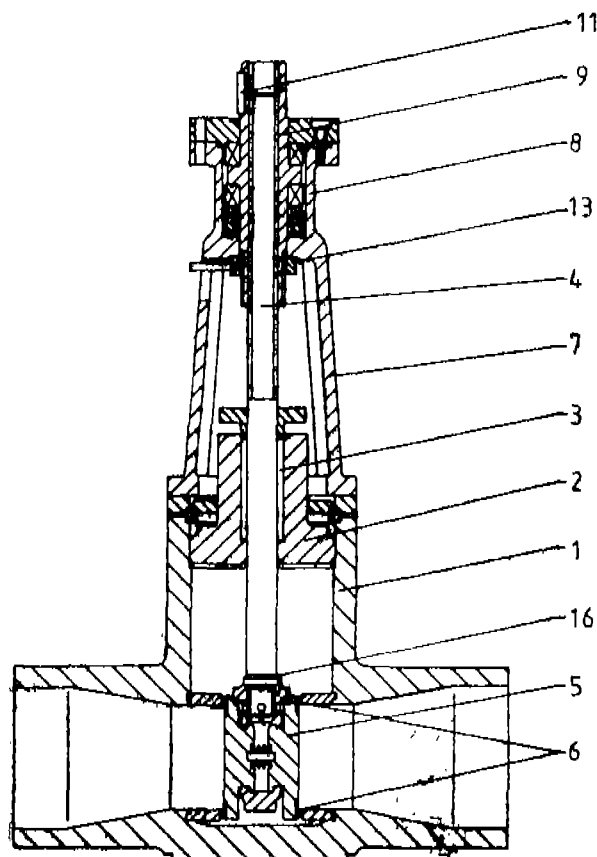
Inventors: 1. KARLHEINZ FEIERLEIN, 2. REINHARD KLIMPKE.

Application No. 38/Cal/86 filed January 20, 1986.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

## 4 Claims.

A valve fitting whose upright, non-rotary threaded stem may be moved upwards and downwards by a servo motor with which it is connected by way of a threaded rotatable sleeve in the bonnet of the valve fitting and the closing motion of the stem is limited by an abutment nut engaging the bonnet, whereas the opening motion of the drive stem is limited by a back seal collar on the stem coming into engagement with a cap of the housing of the fitting and both the opening and also the closing motion is halted by a spring member arranged in the bonnet of the valve fitting, characterized in that the abutment nut is prevented from rotating, is placed on the part of the threaded sleeve extending through the lower wall of the bonnet and is screwed on such sleeve part with a thread of the opposite hand to the thread between the sleeve and the drive stem, a lower face of this wall being adapted to function as an abutmentface for the abutment nut in the shut setting of the valve fitting, whereas a spring element is located on the upper side of this wall to limit axial movement of the thread sleeve.



Compl. Specn 7 pages Drg. 4 sheets.

Compl. Specn. 16 pages. Drg. 1 sheet.

Int. Cl. : B61c 3/00

163969

Int. Cl. : 32F3 a+c,

170D.

163971

ELECTRIC MOTOR-DRIVEN VEHICLE.

Applicant : METALLURGICAL & ENGINEERING CONSULTANTS (INDIA) LIMITED (A GOVERNMENT OF INDIA UNDERTAKING) AT DORENDA, RANCHI-834002, BIHAR, INDIA.

Inventors : 1. AMITAVA DASGUPTA, 2. SUBIMAL GHOSH, 3. SUBRATA BHATTACHARYYA.

Application No. 512/Cal/86 filed July 9, 1986.

Complete Specn. left on 28th September, 1987.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

#### 16 Claims

An electric motor driven vehicle having pneumatic or solid rubber tyres, characterised in that there are provided two pantograph-type current collectors, one being fitted on top and adapted to touch a single overhead conductor, while the other being fitted below the chassis and adapted to make contact with a single ground conductor, and that there is provided an auxiliary power source for supplying power to the drive motor of the vehicle by a switch-over arrangement in the case of the inoperative position of either or both of the said current collectors.

Provisional Specn. 9 pages. Drg. 2 sheets.

Compl. Specn. 19 pages. Drg. 2 sheets.

CLASS : 33-A.

163970

Int. Cl. : B22d 11/16.

PROCESS FOR CASTING MOLTEN METALS.

Applicant : METACON AG., OF OERLIKONSTR. 88, CH-8057 ZURICH, SWITZERLAND.

Inventor : BERNHARD TINNES.

Application No. 547/Cal/86 filed July 21, 1986.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office, Calcutta.

#### 6 Claims

A process for casting molten metals from a tundish into a plurality of continuous casting molds by means of a plurality of controllable valves, each of the molds having a corresponding valve and a measuring section within which the level of the metal is measured, the filling level in each of the molds being maintained at a desired level with respect to the measuring section corresponding thereto and the developing strands emanating from said molds being pulled by a common strand puller drive unit at a steady rate, the process comprising the steps of :

opening all of the valves at the start of a casting operation;

allowing the actual metal level in each of the molds to rise above corresponding dummy bar heads contained therein until such time that the actual metal level reaches a first predetermined level in the lower area of its corresponding measuring section and then throttling the corresponding valve in each of the molds so as to equalize the actual metal levels in all of the molds; and turning on the strand puller drive unit; or, alternatively, if no level equalization of the actual metal level in all of the molds occurs, turning on the strand puller drive unit at such time that at least one of the actual metal levels in the molds reaches a second predetermined level which is below the desired level in the molds.

Compl. Specn. 18 pages. Drg. 2 sheets.

Int. Cl. : C07c-143/42, 143/68, C11D-1/28.

PROCESS FOR THE PREPARATION OF SULFONATED MIXTURES OF FATTY ACID ESTER AND AN ORGANIC COMPOUND THE SULPHONATION PRODUCT WHEREOF IS DETERGENT ACTIVE.

Applicant : HINDUSTAN LEVER LIMITED, A COMPANY INCORPORATED UNDER THE LAWS OF INDIA OF HINDUSTAN LEVER HOUSE, 165/166, BACKBAY RECLAMATION, BOMBAY-400 020, MAHARASHTRA, INDIA.

Inventor : DAVID WILLIAM ROBERTS

Application No. 283/BOM/1985 filed on 11th October, 1985.

Convention priority date 19th October, 1984 (U.K./8426552).

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, Bombay-13.

#### 7 Claims

A process for the preparation of sulphonated mixtures of fatty acid ester and an organic compound (such as hereinbefore described) the sulphonation product whereof is detergent active, said ester being an ester of fatty acid having 8 to 22 carbon atoms in the alkyl chain thereof with an alcohol having 1 to 6 carbon atoms,

said process comprising the steps of :

- (1) reacting the fatty acid ester with a molar excess of sulphur trioxide over 1 : 1 stoichiometry with the fatty acid ester and optionally subjecting the reaction mixture to an ageing step;
- (2) adding said organic compound (such as hereinbefore described) the sulphonation product whereof is detergent-active optionally in admixture with the sulphonation product thereof to the reaction mixture produced in step (1); and
- (3) neutralizing the reaction mixture produced in step (2); said organic compound being added in a quantity which is from 30 to 80 mole % of the said excess of sulphur trioxide.

Complete specification 12 pages; Drawing Nil.

Ind. Cl. : 05k [XLIH(2)]

163972

Int Cl. : B25B-13/46, 13/10.

AN IMPROVED SELF-ADJUSTING UNIVERSAL SPANNER-CUM-PIPE WRENCH.

Applicants & Inventor : MR. HITENDRA VRAJLAL SOLANKI, AND MRS. AARTI CHANDRAKANT SOLANKI, OF A-34 SILVER ARC, BEHIND TOWN HALL ELLIS BRIDGE, AHMEDABAD-380 006, GUJARAT, INDIA.

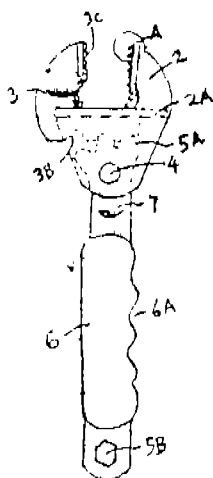
Application No. 348/BOM/1985. Filed on December 20, 1985.

Complete after provisional left on March 3, 1987. 3, 1987.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, Bombay-13.

## 3 Claims

An improved self-adjusting universal spanner-cum-pipe wrench comprising an elongated handle having at its one end a hole with hexagonal configuration for being used as a box-like fixed spanner and the other end thereof having sector gear teeth engaged with matching rack at the base of a moveable jaw having a slot above said rack for slidably engaging a collar/ridge on a fixed jaw having two parallel arms, each having a hole aligned with each other for passing therethrough a pivot pin pivotally engaging said sector gear teeth end of said handle, said fixed jaw being provided with a coil spring wound around said pivot pin, one end of said coil spring being engaged within a blind hole in said fixed jaw and the other end thereof being engaged in a blind hole in said handle adjacent said pivot, each of said fixed jaw and said moveable jaw having a straight flat portion and a curved/concave portion therebelow provided with hawksaw teeth shaped serrations and the handle portion being further provided with heat and electrically insulating sheath having corrugations on its parallel sides forming finger grips.



Complete specification 9 pages. Drawing 1 sheet.  
Provisional specification 9 pages. Drawing 1 sheet.

Ind. Cl. : 128F.

163973

Int. Cl. : A61M-1/00.

## AN IMPROVED DEVICE FOR EXTRACTING SUB-DERMAL POISON FROM THE BLOOD STREAMS.

Applicant & Inventor : SHISHIR TARACHAND KOTHARI, OF BLOCK "A", KALUMAL ESTATE, 5TH FLOOR, JUHU ROAD, BOMBAY-400 049, MAHARASHTRA, INDIA.

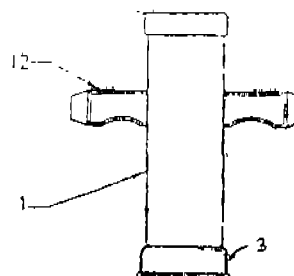
Application No. 349/Bom/1985 filed on December 20, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, Bombay-13.

## 5 Claims

An improved device for extracting sub-dermal poison from the blood stream, comprising a syringe having two diametrically opposite grooves; a piston adapted to reciprocate within the said syringe, having integral flanges and/or handle corresponding said grooves in the said syringe and which are adapted to project from the said grooves, a piston head at the lower end; a suction cup having a lip and a neck region with an opening, which can be either press-fitted or threaded to the lower end of the said syringe; and a stopper at the

top end preventing the flanges and/or handle of the piston from being removed from the said grooves.



Complete specification 9 pages. Drawings 1 sheet.

Ind. Cl. : 36A, [XLIV(1)]

163974

Int. Cl. : F04D-7/00, D21B-1/10.

## A PUMP HAVING SHREDDING MEANS AT THE INLET.

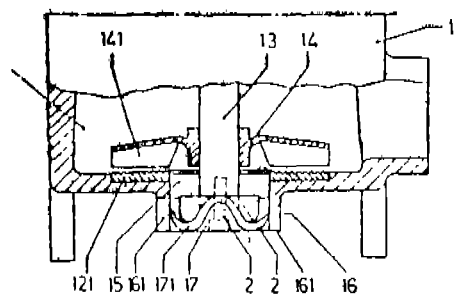
Applicant & Inventor : NARAYAN NARSINHA DESAI, A-13/H.M.I.D.C. INDUSTRIAL AREA, PIMPRI, POONA-411 018, MAHARASHTRA, INDIA.

Application No. 369/BOM/1985 filed on December 31, 1985.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, Bombay-13.

## 21 Claims

A pump having shredding means at the inlet characterised in that at the inlet there are two mutually co-operative members such that during operation one is stationary and the other is rotary and thereby openings for the passage of material are periodically opened and closed, the said two members also constitute the shredding means, and the stationary members also constitute the shredding means and the stationary member is an inlet tube with at least one end profile, and the rotary member is accommodated in the tube and has at least one peripheral formation to co-operate with the or each said end profile for periodically opening and closing said openings and for shredding said material.



Complete Specification 13 pages. Drawings 2 sheets.



CLASS : 35B XXV(2).

163975

Int. Cl. : C04B-7/26.

A PROCESS FOR THE MANUFACTURE OF HYDRAULIC SETTING CEMENT FROM PULVERIZED FUEL ASH.

Applicants : TATA RESEARCH DEVELOPMENT AND DESIGN CENTRE OF 1, MANGALDAS ROAD, POONA-411001, MAHARASHTRA, INDIA, A DIVISION OF TATA CONSULTANCY SERVICES, WHICH IN TURN IS A DIVISION OF TATA SONS LIMITED, AN INDIAN COMPANY AND PROF. PRAKASH CHAND KAPUR AND DR. PRADIP BOTH INDIAN NATIONALS AND OF TATA RESEARCH DEVELOPMENT AND DESIGN CENTRE.

Inventors : (1) PROF. PRAKASH CHAND KAPUR & (2) DR. PRADIP.

Application No. 38/BOM/1986 Filed on 30-1-1986.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, Bombay-13.

#### 11 Claims

A process for the manufacture of hydraulic setting cement from pulverised fuel ash, said process comprising :

- (i) mixing and dry or wet grinding pulverised fuel ash and at least one calcium bearing mineral or compound such as herein described to a fineness of at least 1000 cm<sup>2</sup>/g Blaine Surface Area and further mixing the resulting fines and at least one clinkering agent/or aid such as herein described with water, if required, to form a raw materials mixture the proportions of said ash, calcium bearing mineral or compound and clinkering agent or aid being selected such that the computed percentage ratio of calcium oxide to that of silicon oxide, aluminium oxide and iron oxide in the clinker mass herein referred to is between 1.4 to 2 and that the computed percentage of magnesium oxide in the clinker mass is 1 to 10%.

- (ii) shaping the raw materials mixture, if required;

- (iii) drying the raw materials mixture whether shaped or not shaped if required;

- (iv) clinkering the raw materials mixture in an oxidising atmosphere at a temperature between 1000°C to 1300°C to form a clinker mass;

- (v) cooling the clinker mass to ambient temperature; and

- (vi) grinding the clinker mass to a fineness of at least 3000 cm<sup>2</sup>/g Blaine Surface Area

Completed Specification 20 pages. Drawing Nil.

CLASS : 35 B [XXV(2)].

163976

Int. Cl. : C 04 b-7/24.

A PROCESS FOR THE MANUFACTURE OF HYDRAULIC SETTING CEMENT FROM INTEGRATED STEEL PLANT WASTES.

Applicants : TATA RESEARCH DEVELOPMENT AND DESIGN CENTRE, 1 MANGALDAS ROAD, POONA-411001, MAHARASHTRA, INDIA, AND PROF. PRAKASH CHAND KAPUR AND DR. PRADIP OF TATA RESEARCH DEVELOPMENT & DESIGN CENTRE AFORESAID.

Inventors : (i) PROFESSOR PRAKASH CHAND KAPUR & (2) DR. PRADIP.

Application No. 39/Bom/1986 filed on 30th January, 1986.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, Bombay-13.

#### 10 Claims

A process for the manufacture of hydraulic setting cement from integrated steel plant wastes, said process comprising :

- (i) mixing and dry or wet grinding integrated steel plant wastes such as herein described and at least one calcium bearing mineral or compound such as herein described to a fineness of at least 1000 cm<sup>2</sup>/g Blaine Surface Area and further mixing the resulting fines and at least one clinkering agent or aid such as herein described with water, if required, to form a raw materials mixture, the proportions of said wastes, calcium bearing mineral or compound and clinkering agent or aid being selected such that the computed percentage ratio of calcium oxide to that of silicon oxide, aluminium oxide and iron oxide in the clinker mass hereinafter referred to is between 1.4 to 2 and that the computed percentage of magnesium oxide in the clinker mass is 1 to 10%;

- (ii) shaping the raw materials mixture, if required;

- (iii) drying the raw materials mixture, whether shaped or not shaped;

- (iv) clinkering the raw materials mixture in an oxidizing atmosphere at a temperature between 1000°C to 1300°C to form a clinker mass;

- (v) cooling the clinker mass to ambient temperature; and

- (vi) grinding the clinker mass to a fineness of at least 3000 cm<sup>2</sup>/g Blaine Surface Area.

Compl. Specn. 18 pages.

Drg. Nil.

CLASS : 23 A & H.

163977

Int. Cl. : B 31 B-17/00 & 45/00, B 05 C-1/08.

A SEMI-AUTOMATIC CORRUGATED BOARD PASTING MACHINE.

Applicant & Inventor : KALI PRASAD PODDAR, OF 13, ISHWAR BHAVAN, A ROAD, CHURCHGATE, BOMBAY-400 020, MAHARASHTRA, INDIA.

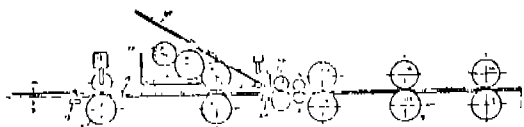
Application No. 60/Bom/1986 filed on 17th February, 1986.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, Bombay-400 013.

#### 3 Claims

A semi-automatic corrugated Board pasting machine for corrugated carton/box making machine comprising a body housing a feeding unit, a gum unit, an alignment unit and a pressing unit, the said feeding unit consists of a pair of feed rolls one of them connected to a prime mover, a feeding table having a micro switch at its side for feeding corrugated paper/linear, a solenoid connected to one of the said feed rolls and a stopper provided in front of feed rolls for aligning the said liner, the said gum unit consists of a set of three adjustable rolls placed in a gum tank for applying a controlled layer gum at the top of the liner one of the three rolls being rotated through a clutch means by the prime mover, the said alignment unit consists of a pair of gripper rolls, being rotated by the said prime mover with the help of gear means, which are having steps on their surface for proper gripping of laminates and the top roll being further provided with rubber or like coating over the steps, a second micro switch, solenoid and stopper of finger provided in the centre of gripper rolls for aligning the plain, printed or

coloured paper sheet being fed at the top of liner through a wooden plate form placed ahead the said gum unit and having photocell sensor; the said pressing unit consists of a number of pressure rolls preferably three sets of rolls driven by chain or like means by the said prime mover the arrangement being such that only when the plain paper sheet and the corrugated liner are properly aligned in front and side lays the photocell sensor gives a signal to the second solenoid and the pasting machine operates and the corrugated liner gets laminated with the plain sheet in proper alignment automatically and the machine does not function, if the two substrates are not aligned properly to one another while being fed.



Compl. Specn. 10 pages.

Drg. 1 sheet.

CLASS : 127 [XV(1)]; 127 I.

163978

Int. Cl. : F 16 C-11/06.

BALL JOINT.

Applicants : TRW EHRENREICH GmbH & CO. KG. HANSA-ALLÉE 190, D-4000, DUSSELDORF 11, WEST GERMANY.

Inventors : (1) HORST HEINZ STEMMER & (2) KARL HEINZ RAHMEDE.

Application No. 206/Bom/1986 filed on 25th July, 1986.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, Bombay-400 013.

8 Claims

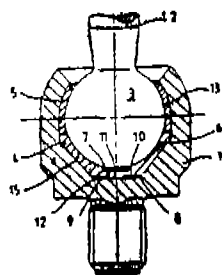
A ball joint comprising :

a housing having a chamber;

a ball stud having a shank portion extending outwardly from said housing and a ball end portion disposed in said chamber;

and a resiliently deformable bearing member disposed between said housing and said ball end portion;

said housing having a plurality of elevation therein each of said elevations having radially extending side surfaces defining recesses between the elevations and said bearing member having portions deformed into said recesses due to preloading said housing and ball end portion.



Compl. Specn. 11 pages.

Drgs. 4 sheets.

CLASS : 35 C.

163979

Int. Cl. : C 04 B-7/00.

A PROCESS FOR MANUFACTURING HYDRAULIC CEMENTITIOUS COMPOSITION BY LOW TEMPERATURE AQUEOUS SOL GEL TECHNIQUE.

Applicant : THE ASSOCIATED CEMENT COMPANIES' LTD., CEMENT HOUSE, 121, MAHARSHI KARVE ROAD, BOMBAY-400 020, MAHARASHTRA, INDIA.

Inventors : (1) CHANDRAKANT HANAMANT PAGE, (2) DINSHAW NADIR THANAVALA, (3) CHINTAMANI HARIHAR THOMBARE, (4) RAVALNATH DAMODAR KAMAT & (5) MRS. VINODINI SHRI-KRISHNA BAPAT.

Application No. 338/Bom/1987 filed on 6th November, 1987.

Appropriate office for opposition proceedings (Rule 4, Patents Rules, 1972) Patent Office Branch, Bombay-400 013.

11 Claims

A process for manufacturing hydraulic cementitious composition by low temperature aqueous sol gel technique comprises of following steps :

- (a) preparing aqueous gel by mixing thoroughly silica on dry gel basis in the form of silica sol with water and adding any known lime bearing materials/compounds.....alumina, iron oxides, magnesia and alkali materials/compounds of the type herein described depending upon the type of cementitious clinker desired to be produced and wherein during mixing and stirring of said ingredients small dosages of activators herein stated being added in required proportions and stirred thoroughly to result in a homogenous admixture;
- (b) drying directly the gel of step (a) or filtering the product of step (a) and then drying at a temperature below 200°C and preferably at temperatures varying from 60°C to 200°C whereby intricate network of complex natured metal-O-metal bonds having highly reactive species get formed;
- (c) Pyro-Processing directly the product of step (b) or after briquetting/pelletising/extruding/nodulizing the product of step (b) in a kiln or furnace heated electrically or by oil/gas/coal fired means at a temperature below 1200°C and preferably at temperature varying from 600°C to 1200°C to form cement clinker;
- (d) allowing the sintered/pyroprocessed product of step (c) to cool down at controlled and optimised cooling conditions to room or ambient temperature to form cement clinker;
- (e) grinding in a ball mill the product of step (d) with or without addition of gypsum to a desired specific surface as per specifications laid down for the end use to which the cementitious composition is to be put to.

Complete Specification 14 pages; Drawings Nil.

CLASS : 35 C.

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**A PROCESS FOR THE MANUFACTURING HYDRAULIC CEMENTITIOUS COMPOSITION BY LOW TEMPERATURE NON-AQUEOUS SOL GEL TECHNIQUE.**

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### 11 Claims

A process for manufacturing hydraulic cementitious compositions of various types herein described at low temperature by non-aqueous sol gel technique comprises of following steps :

- (a) preparing non-aqueous sol gel by mixing and stirring continuously any known lime bearing materials/compounds with any known alumina, iron oxides, magnesia and alkali bearing materials/compounds of the type herein described depending upon the type of cementitious clinker desired to be produced and wherein during the mixing/stirring of said ingredient non-aqueous solvents stated herein being added in desired quantities along with small dosages of activators such as herein stated soluble in said solvents to form a homogenous admixture;

- (b) stirring the admixture of step (a) and heating it at a temperature below 70°C and preferably at temperatures varying from 40°C to 70°C to avoid separation of individual layers of constituents forming said admixture and complete dissolution of individual compounds/constituents occur leading to preparation of gel of desired consistency;
- (c) adding to the product of step (b) silica bearing materials/compounds while stirring is continued till the admixture gets completely homogenised and non-aqueous sol gel is formed;
- (d) drying the product of step (c) in two stages, first at a temperature below 100°C and preferably at temperatures varying from 40°C to 100°C and when at higher temperature below 200°C and preferably at temperatures varying from 70°C to 200°C for complete evolution of said solvent from said gel or first filtering the product of step (c) and then drying in two stages at temperatures aforesaid wherein intricate network of complex natured metal-O-metal bonds having reactive species get formed;
- (e) pyroprocessing the product of step (d) either directly or after pelletising/extruding/briquetting at temperature below 1200°C and preferably at temperatures varying from 300°C to 1200°C in two stages to form cement clinker;
- (f) cooling down the product of step (e) at controlled and optimised cooling conditions to room or ambient temperature to form herein stated variety/ varieties of cement clinker;
- (g) grinding in a ball mill the product of step (f) with addition of 3 to 5 parts by wt. gypsum to a desired specific surface as per specifications laid down for the end use to which this cementitious composition is to be put to.

Compl. Specn. 10 pages.

Drg. Nil.

R. A. ACHARYA  
Controller General of Patents, Designs  
and Trade Marks.

